

Ozone = O_3

We want O_3 up in the stratosphere But
We don't want O_3 in the Troposphere!

Formation of O_3



It keeps
Replenishing
itself!

5.6.2 Describe the role of ozone in the absorption of ultraviolet radiation

• Ozone forms when UV hits oxygen molecules

↳ Most forms @ equator & Bwt. the Tropics because these areas have the most sun

↳ Wind moves Ozone up toward poles where it concentrates.

→ Ozone "absorbs" incoming solar UV lightwaves.

The ozone is broken into $O_2 + O$ in the process.

All of the O's get together to reform more O_2 molecules.

O_2 joins back up with O → more O_3

→ Stratospheric Ozone keeps 95% of harmful UV from Earth.

→ there is seasonal depletion @ the poles.

5.6.3 Explain the interaction between ozone and halogenated organic gases

"The Hole in the Ozone"

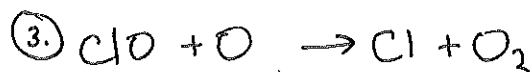
Main Causes:

Natural: Volcanoes + Forest Fires produce Chlorine

What?

reduced concentration of O_3 in the stratosphere, esp. @ the poles w/ seasonal trends

How?



notice in #2
you
end up with
less O_3

Man Made: CFC's "chlorofluorocarbons"
A other Halogens
(Chlorine, Fluorine, & Bromine)

"ODS" AKA "Ozone Depleting Substances"

↳ Stick around Long Time

Very "Persistent" (CFC's - 65-385 yrs)

↳ Found in Coolants, propellants
(in air conditioning & hair spray
until Montreal Protocol)